

## FUSE HOLDING AND SECURING ASSEMBLY

### BACKGROUND OF THE INVENTION

#### 1. Field of the Invention

The present invention relates to a fuse, and more  
05 particularly to a fuse holding and securing assembly.

#### 2. Description of the Prior Art

As shown in FIG. 1, a typical fuse holding and  
securing assembly is shown and comprises two pairs of  
conductor blades 11, 12 provided on a base 10 for  
10 receiving and engaging with and retaining the ends 16  
of a cartridge fuse member 14 and for electrically  
coupling and securing the cartridge fuse member 14 on  
the base 10. The typical fuse holding and securing  
assembly includes a complicated configuration that is  
15 expensive and that may not firmly or solidly securing  
the cartridge fuse member 14 on the base 10 with the  
conductor blades 11, 12. In addition, the ends of the  
cartridge fuse member 14 include a cylindrical shape  
that may not be plugged to the other sockets and that  
20 may not be secured to the other objects with welding  
operations.

The present invention has arisen to mitigate  
and/or obviate the afore-described disadvantages of the  
conventional fuses.

#### 25 SUMMARY OF THE INVENTION

The primary objective of the present invention is  
to provide a fuse holding and securing assembly

including a greatly simplified configuration for greatly reducing the manufacturing fees or costs for the fuse.

05 The other objective of the present invention is to provide a fuse holding and securing assembly including a greatly simplified configuration for allowing the fuse member to be easily and quickly secured on the supporting base.

10 In accordance with one aspect of the invention, there is provided a fuse securing assembly comprising a base, two conductor blades secured to the base and extended outward of the base, the conductor blades each including a groove formed therein, and a fuse member including two ends engaged into the grooves of the  
15 conductor blades for securing to the conductor blades.

The conductor blades each includes an opening formed therein and communicating with the grooves thereof respectively for receiving the ends of the fuse member.

20 The conductor blades each includes a conductor extension extended outward of the base. The base includes an upper portion and a bottom portion, the conductor blades are extended outward from the upper portion of the base, and the conductor extensions are  
25 extended outward from the bottom portion of the base. The conductor extensions preferably include a non-circular cross section for allowing the conductor

extensions to be easily secured or plugged or attached to the other sockets, or objects, or the like.

A cover is further secured to the base for shielding the fuse member and the conductor blades.

05 Further objectives and advantages of the present invention will become apparent from a careful reading of a detailed description provided hereinbelow, with appropriate reference to accompanying drawings.

### BRIEF DESCRIPTION OF THE DRAWINGS

10           FIG. 1 is an exploded view of a typical fuse  
          holding and securing assembly;

FIG. 2 is a partial perspective view of a fuse holding and securing assembly in accordance with the present invention;

15           FIG. 3 is a partial exploded view of the fuse  
          holding and securing assembly;

FIG. 4 is a partial perspective view similar to FIG. 2, in which the cover has been removed from the base of the fuse holding and securing assembly;

FIGS. 5, 6, 7, 8 are partial perspective views similar to FIG. 4, illustrating the other embodiments of the fuse holding and securing assembly;

FIG. 9 is a partial exploded view illustrating the other embodiment of the fuse holding and securing assembly; and

FIG. 10 is a perspective view illustrating the further embodiment of the fuse holding and securing

assembly.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings, and initially to FIGS. 2-4, a fuse holding and securing assembly in accordance with the present invention comprises a base 3 including an upper portion 32, and including two slots 33, 34 formed therein and formed through the base 3. Two conductor blades 2, 6 are engaged in the slots 33, 34 of the base 3 and each includes one end 20, 60 extended upward of the upper portion 32 of the base 3, and each includes a conductor extension 41, 43 extended downward beyond or out of the bottom portion of the base 3. The conductor extensions 41, 43 each preferably includes a non-circular cross section, or a polygonal cross section for facilitating the securing or the plugging or the engaging of the conductor extensions 41, 43 with the other sockets or engaging members or the like.

The one ends 20, 60 of the conductor blades 2, 6 each includes a free end portion having a pair of resilient flaps or ears 21, 61 formed therein, and having a groove 22, 62 formed or defined between the pairs of ears 21, 61, and having an opening 23, 63 formed in the root portion of the grooves 22, 62 respectively. A fuse member 5 includes two ends 51, 52 engaged into the openings 23, 63 of the ends 20, 60 of the conductor blades 2, 6 via the grooves 22, 62 of the conductor blades 2, 6. The ends 51, 52 of the fuse

member 5 include a width or a diameter greater than that of the grooves 22, 62 and the openings 23, 63 of the conductor blades 2, 6, such that the ends 51, 52 of the fuse member 5 may be clamped and secured to the ends 20, 60 of the conductor blades 2, 6. The resilient ears 21, 61 may be biased or moved away from each other when the ends 51, 52 of the fuse member 5 are engaged into the grooves 22, 62 of the ends 20, 60 of the conductor blades 2, 6, and may clamp the ends 51, 52 of the fuse member 5 in the ends 20, 60 of the conductor blades 2, 6 when the ends 51, 52 of the fuse member 5 are engaged within the openings 23, 63 of the ends 20, 60 of the conductor blades 2, 6. A cover 1 may be secured onto the base 3 with a threading engagement, or with an adhesive material, or by a welding process, or the like.

Referring next to FIGS. 5-8, the grooves 22, 62 of the conductor blades 2, 6 may be directed toward different directions. The conductor extensions 41, 43 may include different shapes or cross sections, for easily plugging to the other objects, or for easily securing to the objects with the welding processes or the like. Referring next to FIG. 9, the conductor extensions 41, 43 may be separated from the conductor blades 2, 6 and may be engaged into the slots 33, 34 of the base 3 for electrically coupling to the conductor blades 2, 6 respectively. Referring next to FIG. 10,

the fuse member 5 may also be secured in a casing 7,  
and two conductor members 8, 9 provided on the ends of  
the casing 7 and electrically coupled to the ends of  
the fuse member 5 for electrically plugging or coupling  
05 or securing to the other objects.

In operation, as shown in FIG. 2, the conductor  
extensions 41, 43 may be used for easily securing to or  
plugging to or coupling to the other objects, such as  
the sockets, and the like.

10 Accordingly, the fuse holding and securing  
assembly in accordance with the present invention  
includes a greatly simplified configuration for greatly  
reducing the manufacturing fees or costs for the fuse,  
for allowing the fuse member to be easily and quickly  
15 secured on the supporting base.

Although this invention has been described with a  
certain degree of particularity, it is to be understood  
that the present disclosure has been made by way of  
example only and that numerous changes in the detailed  
20 construction and the combination and arrangement of  
parts may be resorted to without departing from the  
spirit and scope of the invention as hereinafter  
claimed.